

AMENDMENTS TO THE DRAWINGS

The attached drawing sheet (1) include changes to Figure 7. This sheet replaces the original sheet containing Figure 7.

The misspelled term (bending) identified by the Examiner at page 2 of the Office Action has been corrected in the Figure.

REMARKS

Applicants have carefully considered the May 17, 2005 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-33 are pending in this application. In response to the Office Action dated May 17, 2005, claims 7, 14, 21, 28 and 33 have been amended and drawing Figure 7 has been amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification. Applicants submit that the present Amendment does not generate any new matter issue. Entry of the present Amendment is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

The Examiner objected to drawing Figure 7 because of the misspelled term (bending) in the figure. Applicants have amended FIG. 7 to address the Examiner's objection. One replacement page accompany this Amendment. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the drawing objection.

The Examiner requested Applicants to check the specification for the presence of any minor errors. Applicants believe that no amendments to the specification are necessary at the present time.

Claims 7, 14, 21, 28 and 33 were objected to because of minor informalities. Applicants have amended each of these claims to replace the phrase "said cladding part" with "said third

cladding part”. Accordingly, the Examiner is requested to reconsider and withdraw the claim objection.

Claims 1, 3 and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over EP 1063542 A1, hereinafter the “’542 application”. Applicants respectfully traverse.

Applicants would stress that the factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 66 USPQ2d 1801 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). There are significant differences between the claimed inventions and the optical fiber disclosed by the ’542 application that would preclude the factual determination that the ’542 application identically describes the claimed inventions within the meaning of 35 U.S.C. § 102.

The Examiner’s rejection is improperly based upon the combination of the thickness of the embodiment shown in Fig. 7 and the longitudinal and transversal lengths of a separate embodiment shown in Fig. 10 of the ’542 application. An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed in the prior art and that such existence would be recognized by persons of ordinary skill in the field of the invention. *In re Spada*, 911 F.2d 705, 708, 15 USPQ 1655, 1657 (Fed. Cir. 1990); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988). Applicants submit that each of the parameter regarding “thickness”, “longitudinal length” and “traversal length” are parameters that influence each other. Applicants submit that it

is improper for the Examiner to randomly pick out convenient parts from different embodiments of the '542 application. Indeed, the degree of selectivity required to arrive the present claimed subject matter is such to undermine the factual determination of lack of novelty under 35 U.S.C. § 102. *In re Kollman*, 595 F.2d 48, 201 USPQ 193 (CCPA 1979); *Air Products & Chemicals, Inc. v. Charles S. Tanner Co.*, 219 USPQ 223 (D.S.C. 1983); *In re Arkley*, 455 F.2d 586, 172 USPQ 524 (CCPA 1972).

Moreover, the factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention such that one having ordinary skill in the art would have recognized that the identically claimed invention is within the public domain. *ATD, Corp. v. Lydall, Inc.*, 159 F.3d 534, 48 USPQ2d 1321 (Fed. Cir. 1998); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). A prior art references which contains a broad disclosure requiring guessing, testing, speculation or "picking and choosing" from a broad disclosure does not constitute an identical description of a claimed invention within the meaning of 35 U.S.C. § 102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Air Products & Chemicals, Inc. v. Charles S. Tanner Co.*, *supra*; *In re Arkley*, *supra*.

Further, the Examiner asserted that it would be obvious to modify the housing to have a volume less than 500 cm³. However, to accommodate the DCF having the claimed accumulated chromatic dispersion into a small housing, it is necessary to shorten a length of this DCF (equal to increase an absolute value of chromatic dispersion per unit length), and to wind this DCF at a smaller diameter. The later means that the increases of the macro-bending loss and micro-bending loss in the DCF should be suppressed even if the DCF is wound at a smaller diameter. In

contrast, the '542 application does not consider these assumptions. That is, a dispersion compensator as recited in present claim 1 cannot be obtained by only reducing a housing as improperly assumed by the Examiner.

Regarding claims 3 and 4, the Examiner indicated that the insertion loss of the DCF itself is 4 ($= 0.4 \times 10$) dB from the transmission loss (0.4 dB/km) and the length (10 km) of the DCF. However, in an actual dispersion compensator, other loss such a connection loss at the spliced portion 44 between the DCF and pigtail fiber 45, and a bending loss caused by winding DCF in a coil form cannot be disregarded. That is, it cannot necessarily be said that the dispersion compensator of the '542 application satisfies claims 3 and 4.

Accordingly, for the reasons set forth above, Applicants submit that the Examiner's rejection under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the "'542 application is not legally viable and should be withdrawn. The Examiner has provided no fact based motivation as to why the claimed subject matter would have been recognized by a person of ordinary skill in the field of the invention with sufficient clarity and detail to render the present subject matter unpatentable under 35 U.S.C. § 103(a) or 102(b).

Claims 8, 10, 11, 15, 17, 18, 22, 24 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '542 application. Applicants respectfully traverse the rejection for the reasons outlined below.

Applicants submit that conclusion with regard to the housing required to store the DCF (having -100ps/nm) of 1 km being made to correspondingly 200 cm^3 or less because the length of the DCF is ten times less than a length (10 km) is a mere generalization. As described above, to achieve the miniaturization of dispersion compensator, it is necessary to reduce a volume of the housing, shorten a length of the DCF, and further suppress a loss increase when winding the

DCF at a smaller diameter. The '542 application teaches a bending loss (macro-bending loss) of 1 dB/m at a diameter of 20 mm. However, this value becomes 1000dB at 1 km and, therefore, the DCF of the '542 application reference cannot be actually used. Furthermore, regarding a micro-bending loss caused by a winding distortion in a smaller diameter winding, the '542 application does not consider a micro-bending resistance of the DCF itself because it does not teach or remotely suggest MFD, effective area A_{eff} , and the like, which show a spread of light intensity distribution in an optical fiber. Accordingly, Applicants submit that the Examiner has not established a prima facie basis to deny patentability to the claimed invention under 35 U.S.C. § 103 for lack of the requisite factual basis and lack of the requisite realistic motivation. In rejecting a claim under 35 U.S.C. § 103, the Examiner is required to identify a source in the applied prior art for: (1) claim limitations; and (2) the motivation to combine references or modify a reference in the reasonable expectation of achieving a particular benefit. *Smiths Industries Medical System v. Vital Signs Inc.*, 183 F.3d 1347, 51 USPQ2d 1415 (Fed. Cir. 1999).

Accordingly, the Examiner is requested to reconsider and withdraw the rejection under 35 U.S.C. § 103(a).

Claims 2, 5, 6, 9, 12, 13, 16, 19, 20, 23, 26, 27 and 29-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '542 application and further in view of EP 1130428 A1, hereinafter the "'428 application". Applicants respectfully traverse the rejection for the reasons outlined below.

As described above, in order to achieve the claimed volume, it is necessary to suppress a loss increase of micro- and macro-bending losses when winding the DCF, together with both the reduction of the housing of the '542 application and the shortening of the DCF. The '428 application teaches a large chromatic dispersion of -200 ps/nm/km or less and a macro-bending

characteristics (0.1 dB/km or less at a bending diameter of 60 mm), but it does not teach or suggest MFD and A_{eff} . Since the '428 application does not consider a micro-bending resistance of the DCF itself, it is mere speculation on the part of the Examiner to assume that the wounded DCF would be useful when it is wound to such a small.

Moreover, regarding an insertion loss, it cannot be assumed that the claimed invention is obvious, even if the DCF of the '428 application and the housing of the '542 application are combined as suggested by the Examiner. In the paragraph [0018] of the '428 application, a chromatic dispersion becomes large and a transmission loss also increases when increasing Δl (increasing the amount of dopant GeO_2). As disclosed at paragraph [0014] of the '542 application, the DCF has a chromatic dispersion of -100 ps/nm/km and a transmission loss of 0.4dB/km at the condition of $\Delta l=2.1\%$. From this matter, the DCF with a chromatic dispersion of -200 ps/nm/km at the condition of $\Delta l=2.5\%$, mentioned in the paragraph [0048] of the '428 application, is almost certain to have at least a transmission loss of 0.4 dB/km or more. That is, the Examiner's proposed combination cannot simultaneously achieve both a large chromatic dispersion and a low transmission loss. Accordingly, the Examiner is requested to reconsider and withdraw the rejection under 35 U.S.C. § 103(a).

Claims 1, 5-8, 12-15, 19-22 and 26-28 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, 20, 30, 40 and 48-50 of copending Application no. 10/347,417 (hereinafter the "'417 application"). It is believed the Examiner incorrectly cited Application No. 10/347,147 in the statement of the rejection. Applicants submit herewith a Terminal Disclaimer with respect to the '417 Application, thereby overcoming the imposed rejection on the ground of obviousness-type double patenting.

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Applicants, therefore, respectfully solicit withdrawal of the imposed rejection of claims 1, 5-8, 12-15, 19-22 and 26-28.

Claims 7, 14, 21, 28 and 33 were objected to as being allowable if recast in independent form. Applicants submit that for the reasons outlined above, claims 1-33 are in condition for allowance. Moreover, Applicants note the Examiner's Statement of Reasons for Allowance included on page 9 of the Office action. Entry of that Statement into the record should not be construed as any agreement with or acquiescence by Applicants in the reasoning stated by the Examiner. Applicants positions on the issues appear in Applicants' response. The Statement of Reasons for Allowance should not be used to interpret the cited claims, particularly to the extent if any that the Statement of Reasons for Allowance may differ from the express language of the claims and/or Applicants' positions on patentability of those claims. It is respectfully submitted that the allowed claims should be entitled the broadest reasonable interpretation and broadest range of equivalents that are appropriate in light of the language of the claims, the supporting disclosure and Applicants' prosecution of the claims, without reference to the Statement of Reasons for Allowance.

It is believed that pending claims 1-33 are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

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including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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